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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,174

03/26/2004

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021756-069600US

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06/24/2009

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EXAMINER

AHLUWALIA, NAVNEET K

ART UNIT

PAPER NUMBER

2166

MAIL DATE

DELIVERY MODE

06/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. This communication is in response to the Amendment filed 03/10/2009.

Response to Arguments

2. Claims 1 – 22 are pending in this Office Action. After a further consideration and a thorough examination of the present application, claims 1 – 22 remain rejected.
3. Applicant's arguments filed with respect to claims 1 – 22 have been fully considered but they are not persuasive.

Applicant argues that there is no teaching in Lord and Miloushev alone or in combination of providing to said particular shared object an attribute that indicates any object created in said particular shared object after said point in time is designated as node-specific while any object existing in said particular shared object prior to said point in time maintains designation as shared and a pointer associated with said particular shared object to access alternate directory location information for the alternate directory, said alternate directory location information stored in a table having alternate directory location information for each node.

In response to Applicant's argument, the Examiner respectfully disagrees and submits that Lord in combination with Miloushev teaches shared objects and node specific objects in paragraphs 0093 and 0072. Paragraph 0093 discloses the node being enabled in the cluster to share all of the files on the disk. Furthermore, Lord discloses in paragraph 0072 the specific node data structure for the file systems. Also

Art Unit: 2166

Lord in combination with Miloushev teaches providing to said particular shared object an attribute that indicates any object created in said particular shared object after said point in time is designated as node-specific while any object existing in said particular shared object prior to said point in time maintains designation as shared in page 6 paragraph 0096, Lord along with the citations found in Miloushev in paragraphs 80, 9. Also Lord in combination with Miloushev teaches a pointer associated with said particular shared object to access alternate directory location information for the alternate directory, said alternate directory location information stored in a table having alternate directory location information for each node in paragraphs 38, 70 – 72 and 135, Lord along with citation is Miloushev in paragraphs 72, 190, 301 and 427 – 429.

Claims 2 – 22 recite the same subject matter and for the same reasons as cited above the rejection is maintained.

Hence, Applicant's arguments do not distinguish the claimed invention over the prior art of record. In light of the foregoing arguments, the 103 rejections are sustained.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lord et al. ('Lord' herein after) (US 20030028514 A1) further in view of Miloushev et al. ('Miloushev' herein after) (US 2004/0133577 A1).

With respect to claim 1,

Lord discloses a method of providing shared objects and node-specific objects in a cluster file system (Figure 3, Lord), said method comprising: installing a particular shared object in said cluster file system at a point in time after said installation providing to said particular shared object an attribute that indicates any object created in said particular shared object from this point in time will be designated as node-specific while any object existing in said particular shared object prior to providing said attribute maintains designation as shared wherein any object designated as shared in said particular shared object is available to a plurality of nodes (page 6 paragraph 0096, Lord); and when a node in the plurality of nodes causes a file system operation that is node-specific to be performed by accessing said particular shared object, performing said file system operation in an alternate directory corresponding to said node (page 6 paragraph 0100, Lord), wherein said alternate directory supports a node-specific object that is available solely to the corresponding node of said nodes and using a pointer associated with said particular shared object to access alternate directory location information for the alternate directory, said alternate directory location information stored in a table having alternate directory location information for each node (paragraphs 38, 70 – 72 and 135, Lord).

Lord does not teach in detail of the pointer to a table in alternate directory as claimed.

Miloushev however teaches the pointer to a table in an alternate directory as claimed in paragraphs 190 and 427 – 429.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both applications are in the same field of study related with files, file systems and their structure along with use. Furthermore, Miloushev in its rule based aggregations and switched file system teaches in detail about the pointers in the directories which helps in optimization of storage of data in Lord and makes for faster access.

Claims 2 – 7 are rejected based on the same rationale as for claim 1 above. Further, for detailed citations see below.

With respect to claim 2,

Lord as modified discloses the method as recited in claim 1 wherein said particular shared object is a container-type shared object (paragraphs 0035 and 0070, Lord).

With respect to claim 3,

Lord as modified discloses the method as recited in claim 1 wherein said particular shared object is a directory (Figure 7, paragraphs 0070 and 0084, Lord).

With respect to claim 4,

Lord as modified discloses the method as recited in claim 1 wherein said performing said file system operation in said alternate directory further includes: if said alternate directory information for said node indicates that said alternate directory has not been created, creating said alternate directory for said node and updating said table with a location of said alternate directory (paragraphs 103, 123, Lord).

With respect to claim 5,

Lord as modified discloses the method as recited in claim 1 wherein said file system operation that is node-specific includes creating one of a node-specific file and a node-specific directory (paragraphs 0096 – 0097, Lord).

With respect to claim 6,

Lord as modified discloses the method as recited in claim 5 wherein said file system operation that is node-specific includes modifying one of said node-specific file and said node-specific directory (paragraph 0101, Lord).

With respect to claim 7,

Lord as modified discloses the method as recited in claim 5 wherein said file system operation that is node-specific includes deleting one of said node-specific file and said node-specific directory (paragraphs 0079, 0143, Lord).

With respect to claim 8,

Lord discloses a computer-readable medium comprising computer-executable instructions stored therein for performing a method of providing shared objects and node-specific objects in a cluster file system (Figure 3, Lord), said method comprising: installing a particular shared object in said cluster file system at a point in time after said installation providing to a particular shared object an attribute that indicates any object created in said particular shared object from this point in time will be designated as node-specific while any object existing in said particular shared object prior to providing said attribute maintains designation as shared wherein any object designated as shared in said particular shared object is available to a plurality of nodes (page 6 paragraph 0096, Lord); and when a node in the plurality of nodes causes a file system operation that is node-specific to be performed by accessing said particular shared object, performing said file system operation in an alternate directory corresponding to said node, wherein said alternate directory supports a node-specific object (page 6 paragraph 0100, Lord), that is available solely to the corresponding node of said nodes and using a pointer associated with said particular shared object to access alternate directory location information for the alternate directory said alternate directory location information stored in a table having alternate directory location information for each node (paragraphs 38, 70 – 72 and 135, Lord).

Lord does not teach in detail of the pointer to a table in alternate directory as claimed.

Miloushev however teaches the pointer to a table in an alternate directory as claimed in paragraphs 190 and 427 – 429.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both applications are in the same field of study related with files, file systems and their structure along with use. Furthermore, Miloushev in its rule based aggregations and switched file system teaches in detail about the pointers in the directories which helps in optimization of storage of data in Lord and makes for faster access.

Claims 9 – 14 are rejected based on the same rationale as for claim 8 above. Further, for detailed citations see below.

With respect to claim 9,

Lord as modified discloses the computer-readable medium as recited in claim 8 wherein said particular shared object is a container-type shared object (paragraphs 0035 and 0070, Lord).

With respect to claim 10,

Lord as modified discloses the computer-readable medium as recited in claim 8 wherein said particular shared object is a directory (Figure 7, paragraphs 0070 and

Art Unit: 2166

0084, Lord).

With respect to claim 11,

Lord as modified discloses the computer-readable medium as recited in claim 8 wherein said performing said file system operation in said alternate directory further includes: if said alternate directory information for said node indicates that said alternate directory has not been created, creating said alternate directory for said node and updating said table with a location of said alternate directory (paragraphs 103, 123, Lord).

With respect to claim 12,

Lord as modified discloses the computer-readable medium as recited in claim 8 wherein said file system operation that is node-specific includes creating one of a node-specific file and a node-specific directory (paragraphs 0096 – 0097, Lord).

With respect to claim 13,

Lord as modified discloses the computer-readable medium as recited in claim 12 wherein said file system operation that is node-specific includes modifying one of said node-specific file and said node-specific directory (paragraph 0101, Lord).

With respect to claim 14,

Lord as modified discloses the computer-readable medium as recited in claim 12 wherein said file system operation that is node-specific includes deleting one of said node-specific file and said node-specific directory (paragraphs 0079, 0143, Lord).

With respect to claim 15,

Lord discloses a system comprising: a cluster having a plurality of nodes, a mass storage device coupled to said cluster (Figure 3, Lord); and a cluster file system configured to automatically support for node-specific objects in a shared object said cluster file system including a shared directory supporting said shared objects, wherein said cluster file system is configured to provide to said shared object an attribute that indicates any object created in said shared object from this point in time will be designated as node specific while any object existing in said shared (paragraphs 96 and 100, Lord), wherein any object designated as shared in said shared object is available to said plurality of nodes, wherein when one of said nodes in the plurality of nodes causes a file system operation that is node-specific to be performed by accessing said shared object, said cluster file system performs said file system operation in an alternate directory corresponding to said node and supporting a node-specific object that is available solely to the corresponding node of said plurality of nodes, wherein said cluster file system uses a pointer associated with said shared object to access alternate directory location information for the alternate directory, said alternate directory location information stored in a table having alternate directory location information for each node (paragraphs 38, 70 – 72 and 135, Lord).

Art Unit: 2166

Lord does not teach in detail of the pointer to a table in alternate directory as claimed.

Miloushev however teaches the pointer to a table in an alternate directory as claimed in paragraphs 190 and 427 – 429.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both applications are in the same field of study related with files, file systems and their structure along with use. Furthermore, Miloushev in its rule based aggregations and switched file system teaches in detail about the pointers in the directories which helps in optimization of storage of data in Lord and makes for faster access.

Claims 16 – 22 are rejected based on the same rationale as for claim 15 above. Further, for detailed citations see below.

With respect to claim 16,

Lord as modified discloses the system as recited in claim 15 wherein said alternate directory supports a node-specific object (paragraphs 96 and 100, Lord).

With respect to claim 17,

Lord as modified discloses the system as recited in claim 16 wherein if said alternate directory information for said node indicates that said alternate directory has not been created, said cluster file system creates said alternate directory for said node

Art Unit: 2166

and updates said table with a location of said alternate directory (paragraphs 103, 123, Lord).

With respect to claim 18,

Lord as modified discloses the system as recited in claim 16 wherein said file system operation that is node-specific includes creating one of a node-specific file and a node-specific directory (paragraphs 0096 – 0097, Lord).

With respect to claim 19,

Lord as modified discloses the system as recited in claim 18 wherein said file system operation that is node-specific includes modifying one of said node-specific file and said node-specific directory (paragraph 0101, Lord).

With respect to claim 20,

Lord as modified discloses the system as recited in claim 18 wherein said file system operation that is node-specific includes deleting one of said node-specific file and said node-specific directory (paragraphs 0079, 0143, Lord).

With respect to claim 21,

Lord as modified discloses the system as recited in claim 15 wherein said particular shared object is a container-type shared object (paragraphs 0035 and 0070, Lord).

With respect to claim 22,

Lord as modified discloses the system as recited in claim 15 wherein said particular shared object is a directory (Figure 7, paragraphs 0070 and 0084, Lord).

Conclusion

1. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Navneet K. Ahluwalia/
Examiner, Art Unit 2166

Dated: 06/19/2009

/Hosain T Alam/
Supervisory Patent Examiner, Art Unit 2166